

**CLAIMS:**

1. A down converter (100), comprising:

an interface section, which connects the down converter to at least one switch  
5 (104), and each switch is connected to a respective driver circuit (102), wherein the current driver circuits and the switches are disposed on a common integrated circuit (200).

2. A down converter as recited in claim 1, wherein each of the at least one driver

10 circuit is a high-current driver circuit (102), and each of the at least switches is a power switch (104).

3. A down converter as recited in claim 1, wherein the interface section is monolithically integrated with the at least one power switch.

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4. A down converter as recited in claim 1, wherein the down converter includes a high-side current driver (102), which is connected to a high-side power switch (104).

5. A down converter as recited in claim 1, wherein the down converter includes a  
20 low-side current driver (103), which is connected to a low-side power switch (105).

6. A down converter as recited in claim 4, wherein the high side current driver is connected to a level shifter (102).

25 7. A down converter as recited in claim 5, wherein a decoder (106) is connected to the low side block and to a level shifter.

8. A down converter as recited in claim 4, wherein the high-side current driver is a CMOS device (202, 203).

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9. A down converter as recited in claim 5, wherein the low-side current driver is a CMOS device (214, 215).

10. A down converter as recited in claim 1, wherein a parasitic inductor between a current driver circuit and a switch is on the order of approximately 1 nH or less.

11. A down converter as recited in claim 1, wherein the integrated circuit is a silicon-based integrated circuit.  
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12. A down converter as recited in claim 1, wherein the integrated circuit is a SiGe-based integrated circuit.